

**Memorandum**

Date SEP 10 1993

From Bryan B. Mitchell *Bryan Mitchell*  
Principal Deputy Inspector GeneralSubject Summary of Calendar Year 1992 Audit Activity at Colleges and Universities  
(A-01-93-04004)To Kenneth S. Apfel  
Assistant Secretary for  
Management and Budget

Attached for your information and use is a copy of a management advisory report prepared by the Office of Inspector General (OIG) of the Department of Health and Human Services (HHS) summarizing our audit activity in the college and university area for Calendar Year (CY) 1992.

During CY 1992, the Federal Government allocated an estimated \$10.5 billion to research universities. The HHS contributed \$5.5 billion, or 52 percent, of the Federal total. During this same time period, the OIG and nonfederal auditors performed 679 audits in the college and university area. This resulted in Governmentwide findings totaling over \$361.5 million. The primary focus of our audit work was our continuing effort to ensure that only allowable and properly allocable costs are charged to research and to continue to explore meaningful and effective reforms in cost reimbursement methods. Through these audits and special initiatives, OIG:

- o reported that 193 universities, at our request, completed self-reviews and identified about \$63 million in unallowable costs charged to the administrative portion of indirect costs. Some 30 schools issued cash refunds to various Government agencies for the Federal share of unallowable costs totaling about \$4 million. In addition, OIG reported, in early 1992, the results of its 1991 reviews at 14 universities, disclosing an additional \$20.4 million of unallowable costs. This resulted in charges to Federal projects of about \$3 million.
- o provided valuable audit assistance to departmental negotiators regarding indirect cost rates at eight major universities. These reviews provided timely information for the negotiation of these rates, resulting in Governmentwide cost savings of approximately \$113.4 million.

- o reported, in response to congressional concerns on additional indirect cost caps, estimated potential savings: ranging from \$55 million to \$153 million if the administrative cost cap were further reduced, ranging from \$35 million to \$120 million if other categories of indirect costs were capped, and as much as \$1.8 billion if caps in existence prior to 1966 were reinstated.
- o disclosed that Financial Accounting Standards Board Statement Number 106 (FASB 106) could materially increase the amount of Postretirement Benefit costs claimed by schools conducting federally sponsored research. The OIG undertook this as an early alert prior to the full implementation of FASB 106.
- o identified \$3.2 million of overcharges relating to university recharge centers because universities did not adjust billing rates and Office of Management and Budget (OMB) Circular A-21 lacked specificity.
- o reviewed \$81.1 million of medical liability insurance costs at 28 universities concluding that OMB Circular A-21 guidance concerning medical liability insurance costs should be clarified.
- o assisted the Department of Justice in a review which resulted in a \$3.35 million settlement with a major university involving alleged violations of the False Claims Act and OMB Circular A-21. The issues involved overbilling the Government for use of computing facilities.
- o questioned as a result of pre-award and contract closeout audits at colleges and universities proposed costs totaling about \$111 million and actual costs of about \$34 million.

In addition to the above, OIG has numerous other audits and reviews underway with reports in process. We believe that our current audit work and our determination to deal with emerging issues will enable OIG to address significant concerns in the area of federally sponsored research during the 1990's.

To facilitate identification, please refer to Common Identification Number A-01-93-04004 in all correspondence relating to this report. If you have questions, please call me or have your staff contact Daniel W. Blades, Assistant Inspector General for Public Health Service Audits, at (301)443-3582.

Attachment

**Department of Health and Human Services**

**OFFICE OF  
INSPECTOR GENERAL**

**SUMMARY OF CALENDAR YEAR 1992  
AUDIT ACTIVITY AT COLLEGES AND  
UNIVERSITIES**



**SEPTEMBER 1993    A-01-93-04004**

## EXECUTIVE SUMMARY

This report summarizes Calendar Year (CY) 1992 college and university (university) audit work performed by the Office of Inspector General (OIG), Department of Health and Human Services (HHS). During CY 1992, the Federal Government allocated an estimated \$10.5 billion to research universities. The HHS contributed \$5.5 billion, or 52 percent, of the Federal total. Although this represents only 1 percent of HHS outlays, we devoted more than 8 percent of our direct audit resources in order to meet our obligation as the Federal cognizant agency at the great majority of universities performing Federal research.

The OIG has provided significant testimony regarding indirect cost issues at universities during the last two sessions of Congress, and contributed input into the latest revisions of Office of Management and Budget (OMB) Circular A-21. During CY 1992, OIG and nonfederal auditors performed 679 audits in the university area, resulting in Governmentwide findings totaling over \$361.5 million. The focus of our audit work was to ensure that only allowable costs were properly allocated and charged to research, and to continue to explore meaningful and effective reforms in cost reimbursement methods. We also:

- o reported that 193 universities, at our request, completed self-reviews and identified about \$63 million in unallowable indirect costs. Some 30 schools issued cash refunds to various Government agencies for the Federal share of unallowable costs totaling about \$4 million. In addition, OIG reported the results of its 1991 reviews at 14 universities, disclosing an additional \$20.4 million of unallowable costs. This resulted in charges to Federal projects of about \$3 million.
- o provided valuable audit assistance to HHS negotiators regarding indirect cost rates at eight major universities. These reviews provided timely information for the negotiation of these rates, resulting in Governmentwide cost savings of approximately \$113.4 million.
- o reported, in response to congressional concerns on additional indirect cost caps, estimated potential savings: (1) ranging from \$55 million to \$153 million if the administrative cost cap were further reduced; (2) ranging from \$35 million to \$120 million if other categories of indirect costs were capped; and (3) as much as \$1.8 billion if caps in existence prior to 1966 were reinstated.
- o disclosed that the Financial Accounting Standards Board Statement Number 106 (FASB 106) could materially increase the amount of Postretirement Benefit costs claimed by universities conducting federally

sponsored research. The OIG undertook this as an early alert prior to the full implementation of FASB 106.

- o identified \$3.2 million in overcharges relating to university recharge centers because they did not adjust billing rates and OMB Circular A-21 lacked specificity.
- o reviewed \$81.1 million in medical liability insurance costs at 28 universities concluding that OMB Circular A-21 guidance should be clarified.
- o assisted the Department of Justice in a review which resulted in a \$3.35 million settlement with a major university. Alleged violations of the False Claims Act and OMB Circular A-21 related to the overbilling of computer services to Federal research.
- o questioned, as a result of pre-award and contract closeout audits at universities, proposed costs totaling about \$111 million and actual costs of about \$34 million.

Other OIG initiatives included reviews of: (1) the need for improved financial reporting and monitoring related to National Institutes of Health (NIH) research funds; (2) NIH award process; (3) a major university's payroll distribution system; (4) equipment management and utilization at a major eastern university; (5) travel costs incurred by a midwestern university; and (6) compensated absence costs claimed by an eastern university. In addition to these OIG special initiatives, OIG's National External Audit Review Center (NEAR Center) processed 317 university audit reports during CY 1992, resulting in questioned costs of \$1,239,000. The 317 audit reports included 247 single audit reports under OMB Circulars A-128, A-110, and A-133; 44 grant audit reports; and 26 other reports.

The OIG also has numerous other reviews underway with reports in process. We believe our audit work and our determination to deal with emerging issues will enable OIG to address significant concerns in the area of federally sponsored research during the 1990's. The OIG stands ready to continue its commitment to ensure that scarce research funds are efficiently utilized on behalf of the Administration, the Congress, other Departments, and HHS agencies which provide funds to universities.

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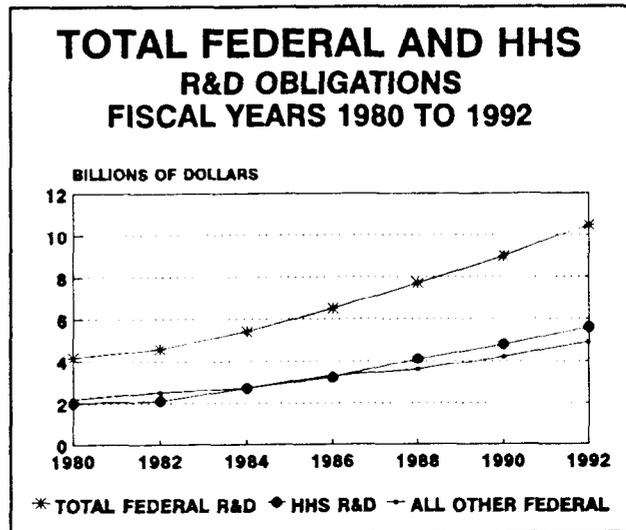
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## INTRODUCTION

### Background

The Federal Government's financial support for the funding of basic and applied research, and the education of future researchers began more than 40 years ago. This support has expanded over the last decade as Federal commitments to research and development (R&D) performed at universities have increased from \$4.2 billion in Fiscal Year (FY) 1980 to an estimated \$10.5 billion in FY 1992, an increase of 150 percent. During this time period, HHS provided an average 51 percent of the total research funding by the Federal Government (see Appendix).

The Federal Government is committed to paying its fair share of total research costs. To ensure that funds provided to colleges and universities are properly spent, the Federal Government assigned cognizance (assignment of oversight responsibility) to Federal agencies, and developed related cost principles and audit requirements. The following sections of the report provide a detailed description of each of these areas.



### Office of Inspector General as Cognizant Auditor

Currently, about 2,450 universities receive Federal funding of one sort or another. Of that number, less than 800 schools receive federally funded research grants and only about 300 have significant levels of funding. Major recipients of Federal funding are generally divided up for Federal oversight by whoever has the largest amount of funding at risk. The OMB, through OMB Circular A-88, assigns cognizance to Federal Departments. Federal agency assignments for carrying out cognizant responsibilities are set forth in OMB Circular A-88, Indirect Cost Rates, Audit, and Audit Follow-up at Educational Institutions.

Currently, audit cognizance for 261 universities with significant levels of funding has been assigned to HHS. The HHS component responsible for negotiating indirect cost rates is the Division of Cost Allocation (DCA) of the Office of the Assistant Secretary for Management and Budget (ASMB). The cognizant or responsible auditor for these schools is OIG. The second largest cognizant agency with most of the remaining major schools is the Department of Defense with 38 schools.

## Cost Principles

The OMB Circular A-21, Cost Principles for Educational Institutions, provides the principles for determining the costs applicable to research and other work performed under federally sponsored agreements. The total cost of federally sponsored research consists of allowable direct and indirect costs. The tests of allowability of costs under these principles are: (1) they must be reasonable; (2) they must be allocable to sponsored agreements under the principles and methods provided therein; (3) they must be given consistent treatment through application of those generally accepted accounting principles appropriate to the circumstances; and (4) they must conform to any limitations or exclusions set forth in the principles or in the sponsored agreement as to types or amounts of cost items.

Direct costs are those that can be identified with a particular sponsored project, an instructional activity, or any other institutional activity, or that can be directly assigned to such activities relatively easily with a high degree of accuracy. Identification with the sponsored work rather than the nature of the goods or services involved is the determining factor in such items as the salaries of the project investigators, travel costs incurred in connection with the project, laboratory supplies, project-specific research equipment and subcontracts.

Indirect costs are costs incurred for common or joint objectives which cannot be readily identified with the specific research projects, instructional programs or other university activities. Indirect costs are, therefore, grouped into a series of indirect cost pools and allocated between research and other activities based on cost allocation procedures. Examples of indirect costs are utility expenses, depreciation of buildings, and general university administration costs.

The successful implementation of the cost principles in OMB Circular A-21 requires a mutual understanding between universities and the Federal Government as to their interpretation. Disclosures by HHS and others in early 1991 showed that universities made interpretations which expanded the types and amounts of costs which they claimed for reimbursement for federally funded research. Accordingly, OMB revised OMB Circular A-21, effective October 1, 1991, to clarify policy and further define accounting standards.

The application of these cost principles should require no significant changes in the generally accepted accounting practices of universities. However, the accounting practices of individual universities must support the accumulation of costs as required by the principles, and provide for adequate documentation to support costs charged to sponsored agreements.

## **Audit Requirements**

Under Federal guidelines, nonfederal auditors review financial and compliance issues at universities. Under cognizant responsibilities, Federal auditors review the work of nonfederal auditors to assure that it has been performed and reported in accordance with Government Auditing Standards and OMB requirements and to identify issues warranting follow-up. In addition, this review function serves to assess the impact of the disclosures and findings on Federal funds and to facilitate an overall audit approach and target additional work or action required to protect the Federal interest.

Until 1990, OMB Circular A-110, Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals and Other Nonprofit Organizations, Attachment F (Standards for Financial Management Systems), contained provisions for organizationwide audits at universities. The prior version of the Circular, however, was proven to be inadequate because audit requirements lacked sufficient detail and did not require OMB Circular A-110 audits to be performed in accordance with generally accepted government auditing standards. Furthermore, the Circular did not require universities to submit the results of their audits to the Federal Government for review.

In response to these inadequacies, our office worked closely with OMB in developing detailed audit requirements. Based on our joint efforts, OMB issued OMB Circular A-133, Audits of Institutions of Higher Education and Other Nonprofit Institutions on March 8, 1990. The OMB Circular A-133 requires educational institutions to have organizationwide audits at least every 2 years and is applicable to audits for FYs that commenced on or after January 1, 1990. State universities, at the election of the State, may be included under the statewide audit in accordance with OMB Circular A-128, Audits of States and Local Governments. Both OMB Circulars A-128 and A-133 require universities to arrange for the performance of organizationwide audits to insure compliance with Federal cost principles contained in OMB Circular A-21 and other pertinent provisions.

In October 1991, OMB issued a compliance supplement to OMB Circular A-133 to assist auditors in conducting their audits. This supplement sets forth compliance requirements and suggested audit procedures relative to direct and indirect costs, administrative requirements, and R&D programs. The full implementation of OMB Circular A-133 will substantially increase and improve audit coverage at universities.

## **METHODOLOGY**

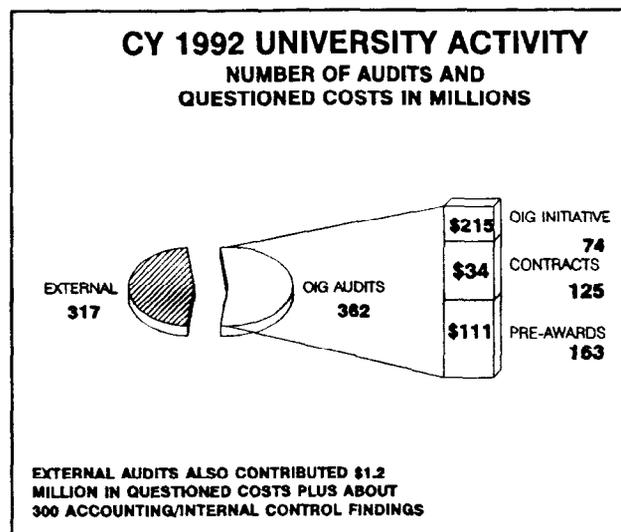
In accordance with OMB Circulars A-128 and A-133, the objective of OIG's audit efforts in the university area is to build upon and supplement the audits performed by nonfederal auditors. The objective of this report is to summarize our audit efforts, apprise ASMB of the status of our audit work in the university area, and furnish our

audit results to the other organizations concerned as required by OMB Circular A-88. To accomplish our objective, we obtained related audit reports and data from OIG Region I office, and requested similar information from our other OIG regional offices. We also obtained information from officials at ASMB and OIG's NEAR Center, and OIG's Audit Information Management System. Through this process, we identified reports of audits conducted at universities and ongoing audit efforts which commenced during CY 1992.

We conducted our review at OIG's Regional Office in Boston, Massachusetts, during March, April, and May 1993.

### STATUS OF CALENDAR YEAR 1992 ACTIVITY

Through some 679 audits and special projects performed during CY 1992, OIG identified questionable charges by universities totaling over \$360 million. Despite limited resources, OIG completed 622 (305 OIG and 317 external) of the 679 audits in CY 1992. Audit reports for the remaining 57 audits should be issued by OIG during CY 1993. Total OIG audits included 163 pre-award contract audits, 125 contract closeout audits and 74 special initiatives. External audits were primarily performed under Federal audit policy contained in OMB Circulars A-110, A-128, or A-133 by certified public accountants, State auditors and other cognizant Departments.



The primary focus of our CY 1992 audit work in the university area was our continuing efforts to ensure that only allowable and properly allocable costs are charged to research and to explore meaningful and effective reforms to the current method of reimbursing such costs. Through these audits and special initiatives, we: (1) disclosed millions of dollars in unallowable costs; (2) motivated numerous universities to conduct in-house reviews; (3) provided valuable audit assistance to DCA for their indirect cost negotiation process; and (4) conducted numerous audits and surveys with recommendations to change current regulations or target areas of potential risk.

Based on audit reports and related information we obtained for the area of colleges and universities, we summarized the following descriptions of major OIG special initiatives and external audits reviewed by the NEAR Center (see page 13).

## OIG SPECIAL INITIATIVES

### Internal Indirect Cost Reviews Performed by Universities

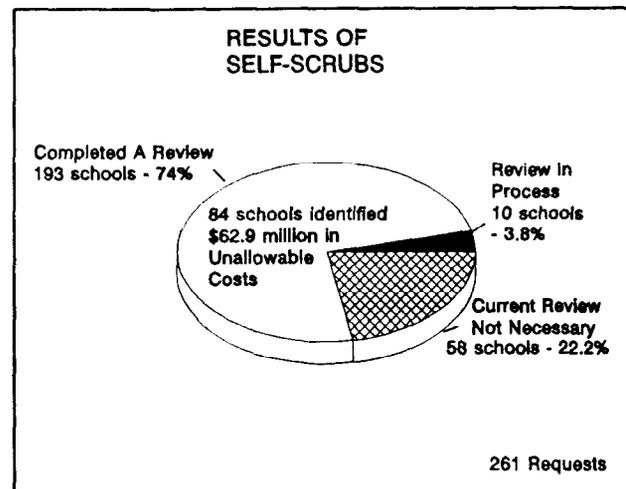
This effort was undertaken to ensure that universities adhered to OMB Circular A-21 cost principles. To determine whether only allowable costs were included in indirect costs allocated to Federal research, OIG and ASMB requested major colleges and universities to use their own resources to conduct self-reviews of their internal procedures.

In response to OIG and ASMB joint efforts, 193 universities completed an in-house review (self-scrubs) of their internal controls and identified total unallowable costs of approximately \$63 million which were charged to indirect cost pools. By allocating unallowable costs to organized research, indirect cost rates at various universities were overstated anywhere from 0.1 percent to 4 percent. To date, approximately 30 schools have issued cash refunds to DCA totaling about \$4 million. At other schools the results of self-scrubs will be considered during upcoming negotiations of new indirect cost rates. This joint effort by OIG and ASMB made maximum use of scarce resources to ensure that significant dollar findings and related financial adjustments were clearly identified.

In addition, OIG reported in early 1992 that the results of our 1991 reviews of general and administrative (G&A) indirect costs at 14 selected universities disclosed approximately \$20.4 million in unallowable charges to administrative cost pools. About 15 percent of this amount (approximately \$3 million), was allocated to research programs primarily sponsored by the Federal Government. Our recommendation to ASMB was to work with OMB to appropriately revise OMB Circular A-21.

### Audit Assistance Provided to DCA

Each year, DCA requests that we provide audit assistance on specific indirect cost issues at selected universities. During CY 1992, OIG started reviews of indirect cost proposals at eight universities as a result of DCA requests. These reviews provided timely information to DCA negotiators for use in negotiating indirect cost rates with the universities. The OIG audits provided information utilized by DCA in negotiating



reduced rates that resulted in cost savings to the Federal Government of approximately \$113.4 million. The following are examples of OIG audit assistance where ASMB negotiations of indirect cost rates have been completed.

- o The OIG's review of a major western university's indirect cost proposal disclosed several deficiencies which overstated the proposed indirect cost rate by about 13 percent. The DCA informed us that an indirect cost rate has been negotiated with the university for 4 years. The negotiation resulted in savings to the Federal Government of \$35.4 million, of which \$30.3 million was based on OIG's work.
- o The OIG's review of a major western university's indirect cost proposal disclosed deficiencies which overstated the proposed on-campus indirect cost rates by 13.35 percent for FY 1992 and 13.59 percent for FY 1993. These rate reductions represent about \$10 million in savings under federally funded grants and contracts for each of these FYs. The deficiencies are primarily related to: (1) unallowable accounts included in the G&A cost pool; (2) special studies related to the costs of utilities, building depreciation and equipment use allowance; (3) projected completion dates and square footage on new buildings; and (4) projected equipment for the new buildings.
- o The OIG and ASMB's collaborative efforts at a major eastern university disclosed adjustments to reduce the proposed research indirect cost rate by over 9 percent and concurrently reduced the amount of indirect costs charged to Federal research programs by about \$1.9 million. Our review of the proposed FY 1990 Equipment Use and Depreciation and Operations and Maintenance (O&M) expense pools disclosed that the university: (1) neglected to credit Organized Research for \$1.5 million of equipment usage and depreciation expenses applicable to \$15.5 million of federally financed equipment; and (2) omitted about 1.2 million square feet of unused and unassigned auxiliary enterprise and non-university space from the base used to determine the campus per square foot occupancy rate, thus increasing the amount of O&M administrative costs allocated to Organized Research.

### **Indirect Cost Issues Related to Research Conducted by Universities**

The OIG conducted a review in response to congressional concerns as to whether reforms to university cost principles proposed by OMB are having the intended effect. The study gathered certain information and statistics regarding indirect cost rates, and included an evaluation of the potential effect of returning to earlier capped rates or of making further reductions to existing rate levels. The report includes information on: (1) estimated savings ranging from \$55 million to \$153 million with further reductions in

the administrative cost cap; (2) capping other categories of indirect costs which could result in savings ranging from \$35 million to \$120 million; (3) returning to arbitrary caps in existence prior to 1966 which could result in savings estimated to be as much as \$1.8 billion; (4) possible causes of escalation of indirect cost rates; and (5) estimated savings of overall caps.

### **Reimbursement to Educational Institutions and Nonprofit Organizations: Guidelines Needed for the Implementation of FASB 106**

The OIG issued a management advisory report which disclosed that the effect of FASB 106 on Postretirement Benefit (PRB) costs could materially increase the amount claimed for reimbursement by schools and organizations (nonprofits) conducting federally sponsored research. We undertook this initiative so we could provide HHS management with an early alert prior to the full implementation of FASB 106.

The FASB 106 results in an accounting change from the cash basis of accounting to the accrual basis for PRB costs. Institutions are now required by FASB 106 to report in their financial statements the accrued liability for PRB costs for current and retired employees. We found that this change in accounting for PRB costs under FASB 106 could materially increase school and nonprofit claims for reimbursement of PRB costs relating to federally sponsored research.

Current cost principles set forth in OMB Circulars A-21 and A-122 do not specifically state whether the accrued portion of PRB expenses should be recognized as a reimbursable cost. Without proper guidance as to whether accrued expenses should be charged, scarce Federal research funds may be used to reimburse unfunded PRB costs. For example, one major northeastern university has determined that its unfunded and unrecognized PRB obligation was approximately \$275 million. Under FASB 106, this amount will be accrued, whether funded or not, and included as an expense, increasing the university's fringe benefit rates by several percentage points. Each increase of 1 percent in the fringe benefit rate would result in about \$578,000 in additional costs charged to Federal research at this university.

We recommended that ASMB: (1) work with OMB to incorporate into the applicable cost principles specific provisions relating to Federal reimbursement of accrued PRB costs; and (2) advise DCA negotiators to give special attention to PRB costs when reviewing fringe benefit rates for schools and nonprofits.

### **Recharge Centers**

Recharge centers operate as in-house enterprises used to finance, account for, and report upon the provision of commonly needed goods and services to other operating units. These centers typically include motor pools, telecommunications, computing services and supply stores. Some universities have established as many as 350 recharge centers to

meet the demand for services. The OMB Circular A-21 allows universities to charge the costs of recharge center services to Federal research provided that they are based on the actual services provided and scheduled rates do not discriminate between the types of users.

The consolidated results of individual audits conducted at 12 universities under HHS cognizance disclosed that Federal research and related indirect costs were overcharged by at least \$3.2 million. These overcharges resulted from recharge centers including inappropriate costs in billing rates used to charge users. For example, we found that some recharge centers: (1) accumulated surplus fund balances and deficits which were not being used to adjust subsequent billing rates; (2) included duplicate or unallowable costs in the calculation of billing rates; (3) included recharge center costs in the calculation of indirect cost rates; (4) used funds of recharge center accounts for unrelated purposes; and (5) billed some users at reduced rates.

We believe that the overcharges primarily resulted because universities did not: (1) establish or adhere to policies and procedures for recharge centers; and (2) maintain adequate accounting systems and records. Furthermore, OMB Circular A-21 does not provide specific instructions for when and how to adjust for surpluses and deficits in fund balances.

#### **Medical Liability Insurance Costs Charged to Federal Research at Universities with Medical Schools**

The OIG reviewed \$81.1 million in medical liability insurance costs at 28 universities and found that these institutions inconsistently charged insurance costs to federally sponsored research. For example:

- o 2 universities charged medical liability insurance of \$52,000 as a direct cost to Federal awards involving human test subjects;
- o 13 universities did not charge medical liability insurance costs to federally sponsored research; and
- o 13 other universities included \$9.7 million of medical liability insurance costs in their indirect cost proposals submitted for negotiation. Medical liability insurance costs charged as an indirect cost are normally allocated to all sponsored research projects, including those not involving human test subjects.

The OIG believes that the universities charged research costs in an inconsistent manner based on varying interpretations of OMB Circular A-21. To ensure that the treatment of medical liability insurance costs are consistent and equitable, OIG recommended that ASMB work with OMB to revise OMB Circular A-21 to provide more specific guidance

in this area. Such guidance would allow medical liability insurance to be allocated to research only to the extent that the research involves human test subjects. The ASMB agreed with OIG's findings and recommendations.

### **Audit Assistance Provided to the Department of Justice**

A major university agreed to a \$3.35 million settlement to resolve allegations that it violated the False Claims Act and provisions of OMB Circular A-21 by overbilling the Federal Government for use of its computing facilities by Federal agencies and grantees. The OIG worked with the Department of Justice in developing this case.

Under the settlement, the university will pay the Federal Government a lump sum of \$2.8 million and provide Federal users with \$550,000 in free computer services. The university also reduced the rate it charges Federal users by 70 percent.

### **Pre-Award and Contract Closeout Audits**

The OIG's largest client for pre-award and contract closeout audits is the Public Health Service (PHS). The PHS agencies awarded over \$4 billion to universities in FY 1992 in the form of grants and contracts. To assist contracting/granting officers in evaluating proposals, OIG will perform pre-award audits based on the officer's concerns, dollar amount of the proposal and other scheduled work. The OIG also provides similar assistance when performing closeout audits of completed contracts.

Disallowed or questioned costs are those charges to a grant or other agreement that OIG or Federal sponsoring agency determines to be unallowable in accordance with applicable Federal cost principles. During CY 1992, OIG performed 163 pre-award audits at universities resulting in questioned costs totaling about \$110.9 million. In addition, we conducted 125 contract closeout audits in the university area, resulting in questioned costs totaling about \$33.7 million. Questioned costs were commonly identified in the normally allowed cost categories of salaries, fringe benefits, equipment and related indirect costs. For example, related costs were deemed unallowable for instances where incorrect bases or rates were used, clerical errors occurred, costs were unsupported by documents or records, and costs were duplicated in other cost categories.

### **Need For Improved Financial Reporting and Monitoring Related to NIH Research Funds at Universities**

The objectives of this review were to determine: (1) if university researchers used funds as set forth in their approved budgets for federally funded projects; and (2) the need for improved NIH monitoring over research costs.

Our review disclosed that NIH funds were not always spent as budgeted. We also found that in many cases awarded funds were not used during the budget period and were

carried forward to the next award period. Both practices are permissible under current Government regulations.

As a result of these practices, we identified trends which show that certain budgeted cost categories tended to be underspent while other cost categories were overspent. Generally, cost categories labeled personnel, other, and travel were underspent while other cost categories labeled supplies, equipment, and consultants were overspent. Although NIH has a requirement for prior approval for "significant rebudgeting," the term is not defined and consequently overlooked, contributing to the practice of shifting expenditures between budgeted line items without approval. We believe that the absence of clearly defined provisions affects NIH's ability to monitor the cost of its research.

Current HHS policies and regulations are based on OMB Circular A-110 and preclude awarding agencies, such as NIH, from requiring detailed line item expenditure reports from its grantees. Therefore, NIH does not require that a separate budget be submitted showing the intended use of unspent budget balances. As a result, NIH has limited detailed information on how its funds are actually used and whether the level of research conducted is consistent with the research proposal approved by its peer review committees.

Since NIH is precluded from requiring detailed information from its grantees, it does not require grantees to submit a separate budget showing the intended use of unspent budget balances. There is great concern over this, especially when the extent of unspent balances is considered. For example, from our sample of 100 research projects reviewed (totaling about \$18.5 million), we found that 52 projects had total unused balances of about \$1.4 million, or about 7.5 percent, at the end of the award period. Projecting these results to our sample universe of 11,453 research projects totaling about \$2.7 billion, we estimated that about 6,000 awards would have unspent balances totaling about \$159 million. This equates to about 5.9 percent of total Federal funds awarded.

In FY 1989, HHS declared that its lack of detailed financial expenditure data on grants was a material weakness for internal control purposes. In 1991, HHS' Office of the Secretary requested OMB to allow HHS to amend its policies and regulations. This proposed amendment would have allowed NIH to require contractors and grantees to submit line item expenditure reports enabling NIH to monitor expenditures. In June 1991, OMB denied the request. However, in April 1992, OMB gave HHS permission to engage in a pilot project with selected universities to obtain detailed expenditure data by electronic transfer.

We recommended that HHS expedite the pilot project for the electronic transfer of detailed expenditure data. We also recommended that NIH define "significant rebudgeting." We further recommended that HHS require grantees to submit a revised budget for the use of unspent grant funds when a substantial carry-over of funds occurs from 1 budget period to another.

## **NIH Award Process**

The OIG conducted interviews with 94 principal investigators (PI) at 39 universities to obtain a cross section of opinions on NIH's award process for funding research, and alternative approaches for awarding Federal funds.

The PIs generally supported NIH's award process. Eighty percent of the PIs interviewed did suggest improvements and identified four general areas of concern: (1) NIH's funding priorities are often targeted toward predetermined areas of research rather than being based on scientific merits of proposals; (2) NIH's application and review process takes an inordinate amount of time and effort to complete; (3) there is an absence of feedback from NIH on progress reports submitted by PIs; and (4) indirect costs of research have questionable value. One-half of the PIs supported indirect cost caps.

The PIs, however, voiced substantial disagreement regarding the desirability of funding research through block grants or requiring mandatory institutional cost sharing. They generally agreed that these proposals would hinder research and make the entire process of funding research more political. The OIG report did not draw conclusions or make recommendations. Rather, it was intended to provide NIH management with a body of knowledge to help identify areas of concern where NIH may want to focus additional study and review.

## **Payroll Distribution System at a Selected University**

The objective of this review was to determine whether the payroll distribution system of a selected university met the requirements of OMB Circular A-21. The review of internal controls was limited to areas relating to: (1) the apportionment of salaries and wages between cost objectives; and (2) records identifying all activities for which employees are compensated.

The review disclosed that the university's payroll distribution system did not meet the criteria specified in OMB Circular A-21 relating to acceptable methods for apportioning salaries and wages. We found that the payroll distribution system did not: (1) encompass both sponsored and all other activities for which the employee is compensated; and (2) reflect categories of activities expressed as a percentage distribution of total activities. As a result, there was no assurance that the current system produced an equitable distribution of charges for all activities performed by the employee.

We recommended that the university develop a payroll distribution system which describes the method for apportioning salaries and wages chargeable to more than one sponsored agreement or cost objective. This system must comply with current OMB Circular A-21 requirements.

## **Equipment Management and Utilization**

The primary objective of this review was to determine whether a major northeastern university effectively managed and utilized equipment purchased with HHS research funds.

We found that the university's policies and procedures required equipment purchased with Federal research funds to be utilized in the conduct of Federal research. We determined, however, that the university did not: (1) maintain current, accurate, and complete equipment records; (2) conduct physical inventories at least once every 2 years; and (3) resolve differences between inventory records and the results of physical inventories in a timely manner. As a result, the university's property management system and related internal controls were less than effective in ensuring against loss, misappropriation, theft or damage of nonexpendable personal property. Further, these weaknesses could result in duplicate charges to Federal research as direct costs for the full acquisition price of equipment and as indirect costs for the amount assessed as a use allowance.

## **Travel Costs Incurred by a Selected Midwestern University**

This review disclosed that travel costs charged to research projects included substantial costs which we could not determine were directly related to research projects. We also noted instances where: (1) travel costs were charged for personnel not assigned to the project charged for the travel; (2) travel occurred prior to authorization; (3) unallowable or excessive costs were charged; (4) convention fees were classified and charged as travel costs; (5) excessive travel advances were given to personnel; and (6) "Frequent Flyer" miles earned under federally funded travel were credited to the traveler's personal frequent flyer account.

We recommended that the university strengthen controls in those areas of cited deficiencies and ensure compliance with OMB Circular A-21 and the university's own travel policies.

To determine whether the problems uncovered at this school are systemic, OIG is including in the FY 1994 Work Plan a nationwide review of university project travel.

## **Compensated Absence Costs Claimed by a Major Eastern University**

The primary objectives of this review were to determine the reasonableness of the amount of accrued personnel absence costs claimed by the university in its fringe benefit pool, and whether these costs were adequately documented.

The review disclosed that the university adequately supported \$12.9 million in compensated absence costs for the period July 1, 1981, through June 30, 1991. We

found, however, that the university included in its fringe benefit rate submissions, duplicate unused sick leave costs totaling \$348,000. In addition, we noted that the university did not credit federally sponsored programs for approximately \$65,000 of interest income earned on the investment of the federally funded portion of the compensated absence balances.

We recommended that the university reimburse the Federal Government about \$78,000 (\$13,000 of duplicative sick leave costs plus \$65,000 of investment income) and reduce FY 1992 and future proposed fringe benefit pool of expenses by the duplicated amounts of unused sick leave expenses previously included as claimed compensated absence costs. This pool contained \$348,000 of duplicative unused sick leave expenses as of June 30, 1991. We also recommended that the university reduce the amount claimed in compensated absence liability by the amount of investment income earned on the funded portion of the compensated absence balances for FY 1992 and future periods. The investment income earned for FY 1991 totaled \$322,000.

### **OIG CONGRESSIONAL TESTIMONY**

On January 29, 1992, the Deputy Inspector General for Audit Services (DIGAS) of HHS and the Regional Inspector General for Audit Services of Region I testified before Congress regarding indirect costs at universities, recent changes to OMB Circular A-21 cost principles, and future oversight plans.

Included in the testimony were discussions of the types of unallowable costs found in indirect cost proposals at 14 universities included in OIG's indirect cost audit. The testimony also included discussions regarding which types of costs need further clarification and guidance.

The DIGAS concluded the testimony by stating that OIG's audit efforts will be directed at ensuring that only allowable and properly allocable costs are charged to research and that we continue to explore meaningful and effective reforms to the current method of reimbursement for such costs.

### **EXTERNAL AUDIT REPORTS OF UNIVERSITIES**

Under Federal guidelines (OMB Circulars A-110, A-128 and A-133), nonfederal auditors review financial and compliance issues at universities. Cognizant Federal auditors may build upon the efforts of the nonfederal auditors when they need to perform extended or specific audit tasks. The NEAR Center is OIG's division responsible for receiving, evaluating and distributing within the Department all external audit reports covering direct HHS funding or cognizant assignments, including those prepared by nonfederal and cognizant Federal auditors (e.g., Defense Contract Audit Agency). The NEAR Center also provides technical assistance regarding planning, conducting or reporting on nonfederal audits covering HHS funds or cognizance responsibilities.

During CY 1992, the NEAR Center processed 317 external audit reports pertaining to universities. The total amount audited was about \$68 billion, \$7 billion of which were Federal dollars. The HHS portion of the Federal amount was approximately \$2 billion. The NEAR Center initiated resolution by HHS officials of \$1,239,000 in questioned costs reported by external auditors. In addition, the NEAR Center identified 313 other recommendations related to weaknesses in the universities' financial management systems and internal control policies and procedures.

The 317 university external audit reports that were processed by the NEAR Center are classified, by type, as follows:

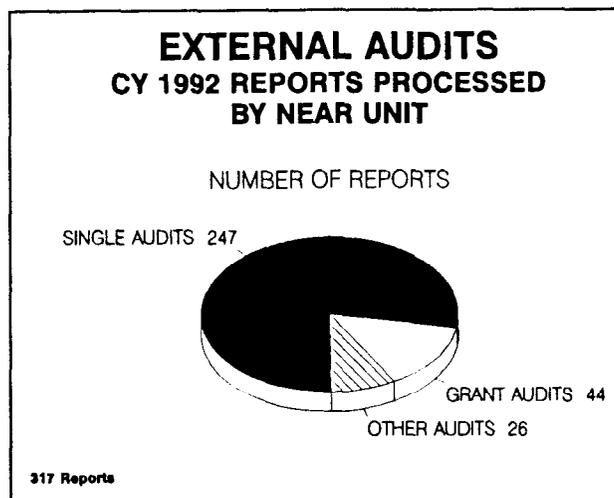
- 247 OMB Circulars A-110, A-128 and A-133 Single Audit reports.
- 44 Grant audit reports.
- 26 other Federal audit reports.

Grant audit reports and other Federal audit reports related to work conducted by other cognizant Federal auditors for specific tasks, such as pre-awards, contract closings, and student loans.

## CONCLUSIONS

We believe the audits and special studies performed by OIG and the implementation of OMB Audit Circulars and the Single Audit Act, provide a comprehensive body of audit work in the area of federally sponsored research at universities. As noted in this report, OIG recommendations have resulted in recovery of misspent funds, significant savings related to future expenditures, and meaningful reforms to the methods and regulations governing the reimbursement of research costs.

We believe that our current and planned audit work will continue to address significant concerns in the area of federally sponsored research during the 1990's. The OIG also stands ready to continue to enhance its efforts on behalf of the Administration, the Congress, other Departments and HHS agencies which provide funds to universities.



To facilitate identification, please refer to Common Identification Number A-01-93-04004 in all correspondence relating to this report. If you have questions, please call me or have your staff contact Daniel W. Blades, Assistant Inspector General for Public Health Service Audits, at (301)443-3582.

# APPENDIX

**FEDERAL RESEARCH AND DEVELOPMENT OBLIGATIONS TO COLLEGES AND UNIVERSITIES**  
(DOLLARS IN MILLIONS)

**UNAUDITED**

YEAR	TOTAL	USDA	COM	DOD	OEO	ED	DOE	EPA	MHS	HUD	INT	AID	LABOR	NASA	MSF	MRC	DOT
1963	\$ 829.5	\$ 40.6	\$ 1.5	\$ 218.0	\$ 0	\$ 0	\$ 68.3	\$ 0	\$ 332.9	\$ 0	\$ 3.8	\$ 0	\$ 0	\$ 59.8	\$ 104.6	\$ 0	\$ 0
1964	975.6	47.5	1.1	258.1	0	0	70.5	0	399.2	0	5.0	0	0	78.2	115.8	0	0
1965	1,095.0	59.1	2.1	267.9	0	0	74.8	0	441.9	0	9.5	0	0	100.6	139.2	0	0
1966	1,252.1	62.9	2.1	278.0	0	0	83.2	0	507.3	0	18.7	0	0	107.4	192.5	0	0
1967	1,301.2	64.0	3.4	264.1	0	0	89.7	0	577.0	0	23.9	0	0	109.0	170.2	0	0
1968	1,398.3	62.2	6.7	243.1	12.5	0	101.8	0	619.1	1.0	27.8	0	6.6	126.1	187.7	0	3.2
1969	1,474.7	63.6	1.7	278.7	9.3	0	103.1	0	667.1	1.0	23.5	3.9	9.1	122.3	191.5	0	0
1970	1,446.6	67.4	3.2	265.5	18.9	0	101.4	0	614.9	.5	27.1	5.5	3.5	127.4	201.2	0	10.1
1971	1,551.4	74.8	6.9	249.0	16.4	0	95.9	17.0	695.7	.7	21.3	17.1	3.3	128.5	216.9	0	8.0
1972	1,853.1	88.6	23.6	243.9	8.3	0	86.8	17.7	879.4	1.5	23.0	13.5	7.3	112.4	334.7	0	12.4
1973	1,870.7	93.8	24.9	232.9	8.7	0	85.2	18.6	903.8	.9	22.2	8.4	5.0	102.6	348.5	0	15.2
1974	2,085.2	96.7	26.6	184.4	3.4	0	94.6	24.1	1,129.0	.6	22.2	18.4	5.6	92.0	376.1	0	11.5
1975	2,246.1	110.5	22.2	190.5	0	0	119.2	33.8	1,205.2	2.3	27.2	8.3	4.0	100.2	404.6	0	18.1
1976	2,431.0	124.2	29.0	211.9	0	0	138.1	29.3	1,296.2	1.4	25.7	10.7	3.0	106.8	436.6	3.2	14.9
1977	2,803.0	142.2	32.2	267.3	0	0	187.2	45.0	1,452.1	4.3	27.4	20.2	7.2	113.7	491.0	3.8	9.6
1978	3,385.8	175.3	35.0	452.3	0	0	251.1	51.1	1,657.6	10.5	34.3	24.9	12.6	124.7	531.5	8.4	16.4
1979	3,873.5	193.8	45.9	528.7	0	0	256.4	60.9	1,966.5	4.0	35.3	28.0	11.1	137.2	587.8	6.5	11.4
1980	4,160.5	211.8	50.4	555.9	0	48.0	279.6	76.9	2,025.6	4.3	38.8	38.6	10.3	161.3	633.9	6.1	19.1
1981	4,410.9	241.4	51.1	700.5	0	56.1	281.8	64.2	2,112.8	3.0	30.2	31.3	12.9	173.9	616.8	7.0	27.8
1982	4,554.5	256.5	39.7	813.7	0	35.6	265.2	78.1	2,110.6	.5	21.5	50.4	8.4	167.7	689.8	5.0	11.7
1983	5,024.3	273.9	50.1	913.3	0	34.9	296.6	45.3	2,360.3	1.1	20.8	43.4	6.4	189.4	759.1	4.7	25.1
1984	5,448.8	273.0	75.6	827.8	0	43.6	317.1	47.3	2,681.4	.2	32.2	56.3	3.1	203.8	869.6	4.6	13.2
1985	6,246.2	300.4	79.7	908.9	0	69.6	373.1	61.9	3,098.6	.2	32.9	57.0	3.4	237.3	1,011.1	4.9	7.2
1986	6,456.7	290.1	68.3	1,055.0	0	72.2	346.9	67.9	3,212.1	.1	40.9	44.3	3.7	254.0	983.9	3.8	13.3
1987	7,241.0	296.0	87.6	1,098.9	0	85.2	371.6	67.1	3,835.3	.1	39.4	53.3	8.3	293.6	987.5	3.9	13.2
1988	7,719.2	321.3	75.8	1,194.2	0	69.6	407.6	64.1	4,128.3	.1	39.1	48.5	8.0	339.5	998.3	3.6	21.3
1989	8,552.6	336.0	66.0	1,220.6	0	68.6	448.7	77.5	4,512.0	0	52.8	65.3	6.5	435.7	1,206.6	4.3	21.9
1990	9,031.0	349.1	97.3	1,196.9	0	71.3	512.4	87.1	4,774.5	.1	57.8	47.4	8.6	470.7	1,304.6	4.6	48.6
1991*	9,715.6								5,185.1								
1992*	10,452.0								5,631.0								

\* These figures were calculated using the average escalation percentage from 1980 - 1990.

NOTE: The average of 51 percent for MHS funding for the period 1980 through 1992 was calculated by determining the percent of MHS funding to total funding for each year (e.g. 1980 - \$2026/\$4161 = 49%), and dividing the sum of the percentages by 13 years (658 percent/13 years = 51 percent).